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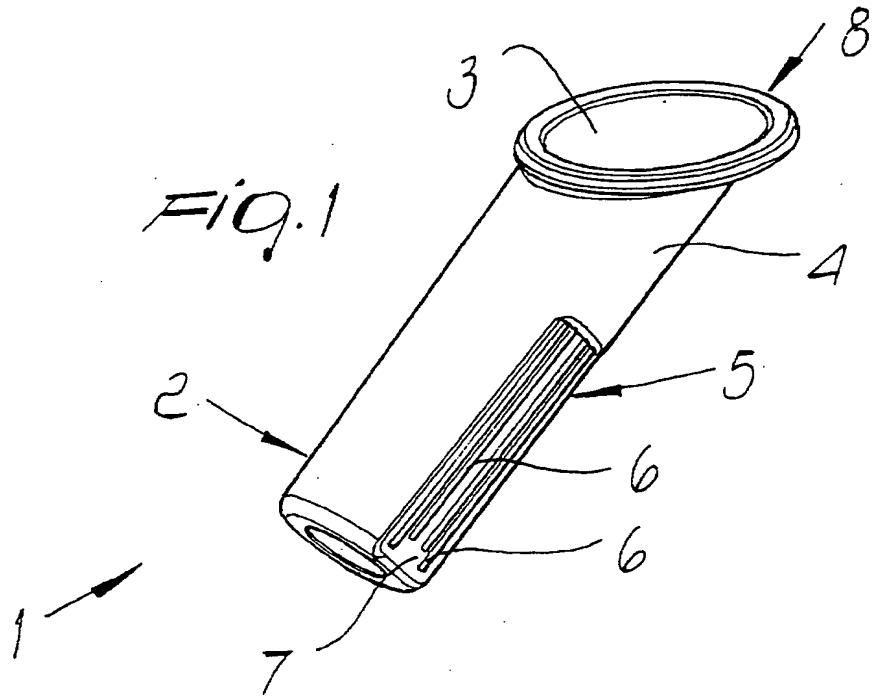
(54) Single-dose container for substances which can be taken orally, particularly pharmaceutical products

(57) A single-dose container (1) for substances that can be taken orally, particularly pharmaceutical products, comprises a hollow body (2) for containing the substance which is provided with a dispensing opening (3), and has external curvatures (5) formed on its lateral surface which are adapted to constitute means for gripping the container.



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Description

[0001] The present invention relates to a single-dose container for substances which can be taken orally, particularly pharmaceutical products.

[0002] Single-dose containers are known in which liquid or semisolid pharmaceutical products, e.g. solutions or syrups to be taken orally in predefined amounts, which correspond to therapeutic doses, are packaged and stored.

[0003] These containers are made of plastics and are constituted by a product containment body having a dispensing opening closed by a plug or by an adhesive film which can be removed at the time of use.

[0004] In some cases it is possible to administer the therapeutic single dose directly from the container; in other cases, instead, the product must be poured into a glass, a spoon or the like before being ingested by the user.

[0005] Conventional single-dose containers, however, are not free from drawbacks, including the fact that they are shaped and contoured in such a manner that they do not ensure safe and easy grip of the containment body and require the user to apply squeezing actions which can cause unwanted deformations of said container, with consequent uneven or partial dispensing of the contained products.

[0006] As an alternative, single-dose containers are known whose body is provided with additional tabs or extensions for grip by the user; however, they suffer from the drawback of unsafe and unstable grip, due both to the small size of the tabs and to the inward deformations that occur proximate to the line where joining with the body of the container occurs, preventing regular dispensing of the contained product.

[0007] It should be noted that difficult and unsteady grip causes instability and/or loss of contact between the hands of the user and the container, and this causes spillage and waste of the product, which is often inherently expensive and/or dosed in predefined amounts according to the therapeutic effect that it must have.

[0008] The aim of the present invention is to eliminate the above-noted drawbacks of conventional single-dose containers by providing a single-dose container for substances which can be taken orally, particularly pharmaceutical products, which allows easy and stable grip, ensures safe contact with the user's hands, eliminates the need for squeezing and allows to dispense the contained product completely without spillage or waste.

[0009] Within this aim, an object of the present invention is to provide a structure which is simple, relatively easy to provide in practice, safe in use, effective in operation, and relatively low in cost.

[0010] This aim and this object are both achieved by the present single-dose container for substances that can be taken orally, particularly pharmaceutical products, of the type comprising a hollow body for containing the substance which is provided with a dispensing opening, characterized in that said hollow body has external curvatures formed on its lateral surface which are adapted to constitute means for gripping said container.

[0011] Further characteristics and advantages of the present invention will become better apparent from the detailed description of a preferred but not exclusive embodiment of a single-dose container for substances that can be taken orally, particularly pharmaceutical products, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a perspective view of a first embodiment of a single-dose container for substances that can be taken orally, particularly pharmaceutical products, according to the invention;
Figure 2 is a front view of the container of Figure 1;
Figure 3 is a side view of the container of Figure 1;
Figure 4 is a front view of a series of a second embodiment of containers according to the invention;
Figure 5 is a side view of the series of containers of Figure 4;
Figure 6 is a perspective view of the series of containers of Figure 4.

[0012] With reference to the figures, 1 generally designates a single-dose container for substances that can be taken orally, particularly pharmaceutical products.

[0013] The container 1 is constituted by a hollow body 2 which contains a dose of the substance to be taken and is provided with a dispensing opening 3 which is formed at its top.

[0014] The container 1 is produced monolithically, is made of a heat-sealable plastic material and has an element for closing the opening 3, such as a stopper or an adhesive strip, which can be removed upon use and is not shown since it is of a conventional type.

[0015] At two opposite sides of the surface 4, the body 2 is provided with two external curvatures 5 which are anatomically shaped and are provided with ridges 6 to allow the user's fingers to grip the container 1 directly, safely and stably.

[0016] In the illustrated embodiments, the curvatures 5 are constituted by recesses formed in the surface 4 and the ridges 6 protrude with respect to the bottom surface 7 of said curvatures 5.

[0017] Alternatively, the curvatures 5 can be constituted by raised portions formed on the surface 4 or by an alternation of raised portions and recesses, while the ridges 6 can lie inward with respect to the bottom surface 7 of the curvatures 5.

[0018] The ridges 6 extend substantially along the longitudinal dimension or along a transverse dimension of the body 2.

[0019] Conveniently, at least one portion 8 of the profile of the opening 3 is anatomically shaped to allow the user's lips to rest directly thereon, so as to avoid spilling and wasting the contained product.

[0020] In the first embodiment of the container 1 (Fig-

ures 1 to 3), the body 2 is a cylinder at one end of which the dispensing opening 3 is formed; the opening is substantially oval and arranged obliquely with respect to the longitudinal axis of the cylinder, and the curvatures 5 are formed on the lateral surface 4 of said cylinder, proximate to the opposite end.

[0021] The curvatures 5 are constituted by mutually opposite and symmetrical recesses which lie substantially along the longitudinal dimension of the cylinder; multiple ridges 6 are formed on the bottom surface 7 of said curvatures.

[0022] As an alternative, in the second embodiment of the container 1 (Figures 4 to 6) the body 2 is substantially shaped like a tray on the top of which the dispensing opening 3 is provided and on the lateral surface 4 of which two outer curvatures 5 are formed.

[0023] The curvatures 5 are constituted by mutually opposite and symmetrical recesses, on the bottom surface 7 of which there are provided multiple transverse ridges 6.

[0024] Conveniently, the container 1 is produced as individual and separate parts, as in the case of the cylinder of Figure 1, or in strips 9 constituted by a plurality of containers 1 which are arranged side by side and connected one another, as in the case of the trays of Figure 6.

[0025] In this last case, each container 1 of the strip 9 is provided with at least one lateral wing 10 which couples to a corresponding wing 10 of another container 1 adjacent thereto.

[0026] Each pair of adjacent wings 10 that interconnect two successive containers 1 is provided with a predefined fracture line, such as to allow the separation of containers upon use.

[0027] In practice it has been found that the described invention achieves the intended aim and object.

[0028] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the inventive concept.

[0029] All the details may further be replaced with other technically equivalent ones.

[0030] In practice, the materials used, as well as the shapes and the dimensions, may be any according to requirements without thereby abandoning the scope of the protection of the appended claims.

[0031] The disclosures in Italian utility model application no. MO2000U000006, from which this application claims priority, are incorporated herein by reference.

[0032] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

Claims

1. A single-dose container for substances that can be taken orally, particularly pharmaceutical products, of the type comprising a hollow body (2) for containing the substance which is provided with a dispensing opening (3), characterized in that said hollow body (2) has external curvatures (5) formed on its lateral surface (4) which are adapted to constitute means for gripping said container (1).

2. The container according to claim 1, characterized in that said curvatures (5) are anatomically shaped for direct grip on the part of the user's hands.

3. The container according to one or more of the preceding claims, characterized in that said curvatures (5) are constituted by recesses formed on said lateral surface (4).

4. The container according to one or more of the preceding claims, characterized in that said curvatures (5) are constituted by raised portions formed on said lateral surface (4).

5. The container according to one or more of the preceding claims, characterized in that said curvatures (5) are provided with ridges (6) which protrude with respect to their bottom surface (7).

6. The container according to one or more of the preceding claims, characterized in that said curvatures (5) are provided with ridges (6) which lie inward with respect to the bottom surface (7) of said curvatures (5).

7. The container according to claims 5 and 6, characterized in that said ridges (6) lie substantially along the longitudinal dimension of said hollow body (2).

8. The container according to claims 5 and 6, characterized in that said ridges (6) lie substantially along a transverse dimension of said hollow body (2).

9. The container according to one or more of the preceding claims, characterized in that said curvatures (5) are two in number and are formed at two mutually opposite sides of said lateral surface (4).

10. The container according to one or more of the preceding claims, characterized in that said dispensing opening (3) is anatomically shaped to allow the user's lips to directly rest thereon.

11. The container according to one or more of the preceding claims, characterized in that said hollow body (2) has a substantially cylindrical shape and has said dispensing opening (3) at one end and said

outer curvatures (5) proximate to the opposite end.

12. The container according to claim 11, characterized in that said dispensing opening (3) is substantially oval and is arranged obliquely with respect to the longitudinal axis of the cylindrical body (2).

13. The container according to one or more of the preceding claims, characterized in that said hollow body (2) is constituted by a kind of tray on the top of which said dispensing opening (3) is formed and on the lateral surface (4) of which said outer curvatures (5) are formed.

14. The container according to claim 13, characterized in that it is provided with at least one lateral wing (10) for coupling to the wing (10) of an adjacent container (1), each pair of adjacent wings (10) being provided with a predefined fracture line.

15. The container according to one or more of the preceding claims, characterized in that it is formed monolithically and made of heat-sealable plastic material.

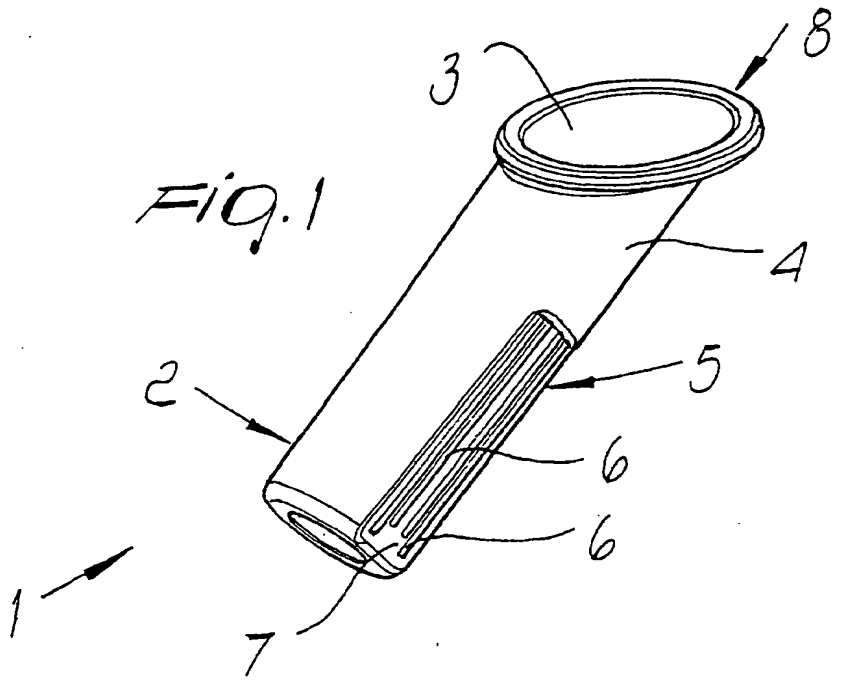

FIG. 1

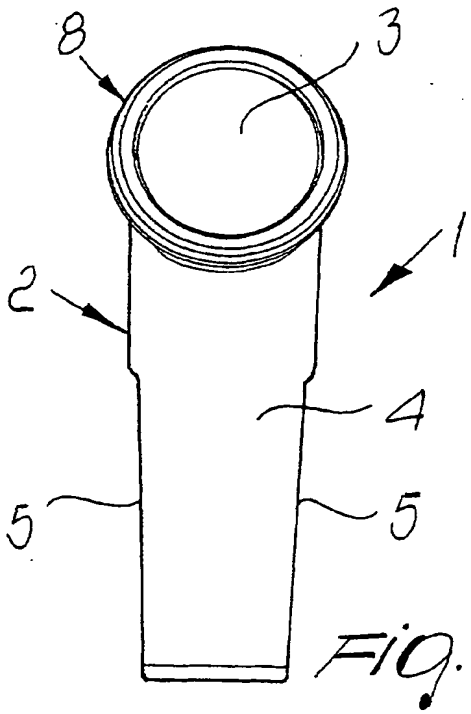

FIG. 2

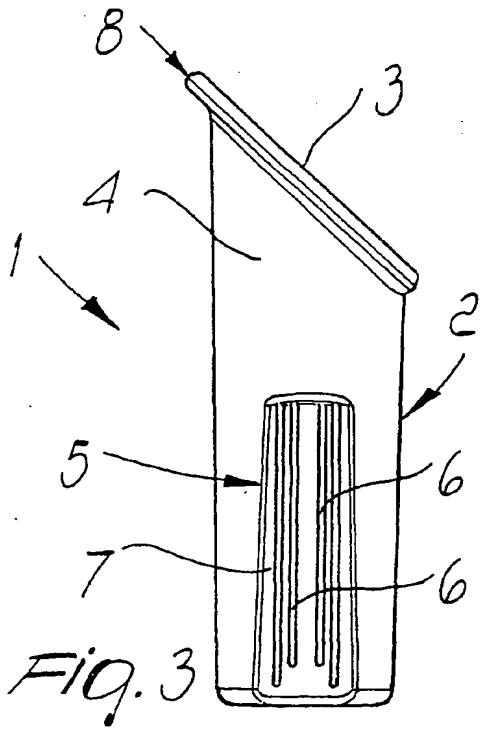

FIG. 3

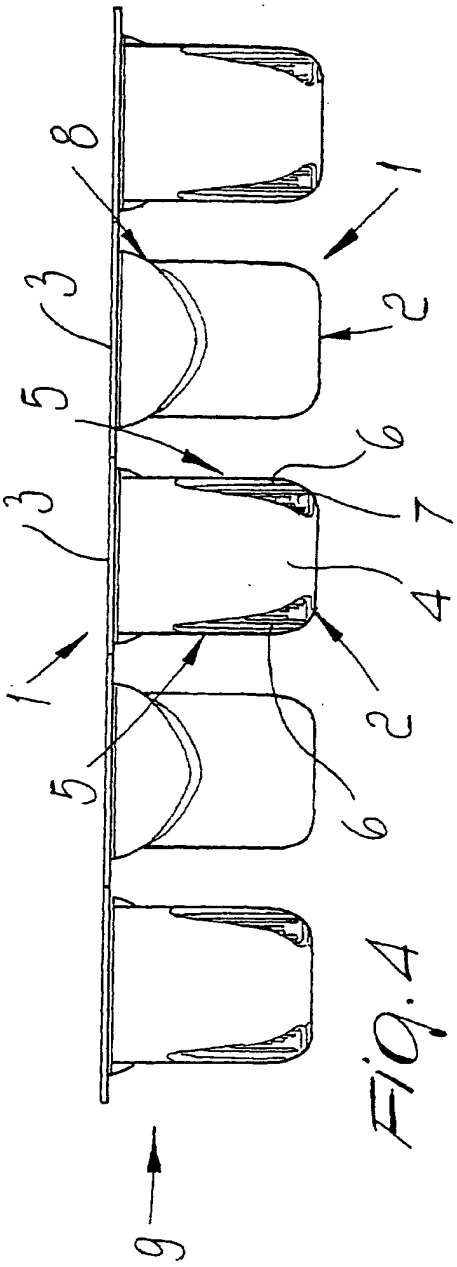

Fig. 4

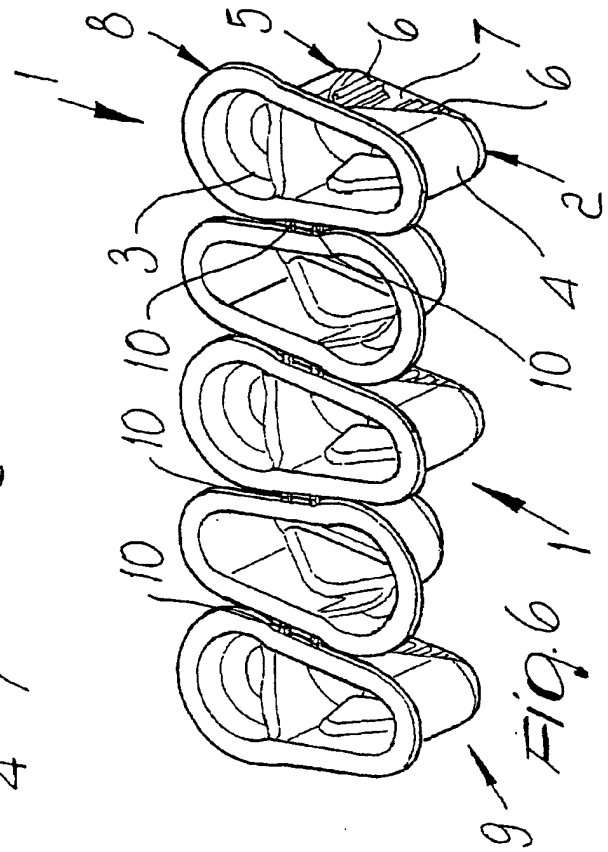

Fig. 6

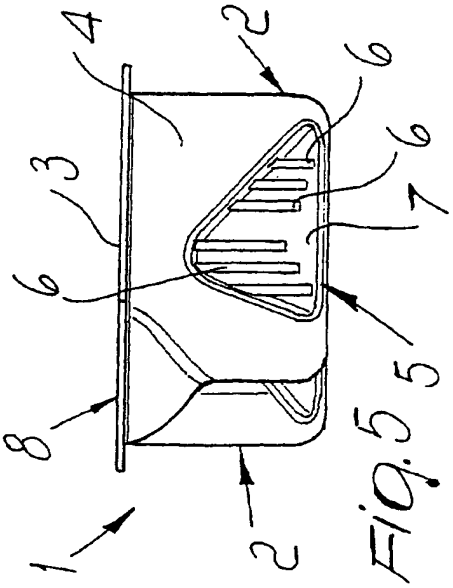

Fig. 5